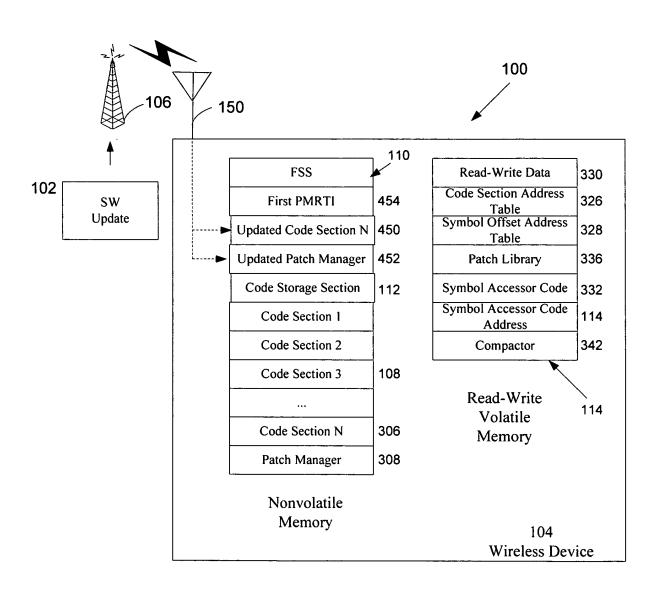
Title: SYSTEM AND METHOD FOR COMPACTING FIELD UPGRADEABLE WIRELESS COMMUNICATION DEVICE

Inventor(s): RAJARAM, Gowri and KAPLAN, Diego



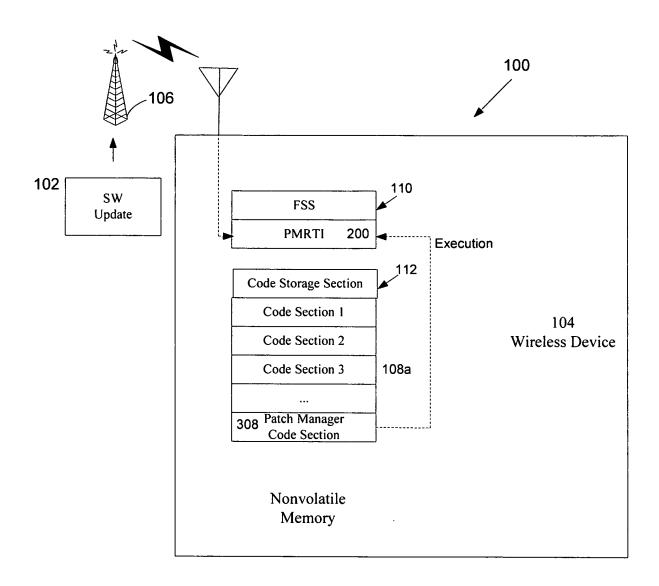
Figure 1
Wireless Device With OTA Updatable
Software Architecture



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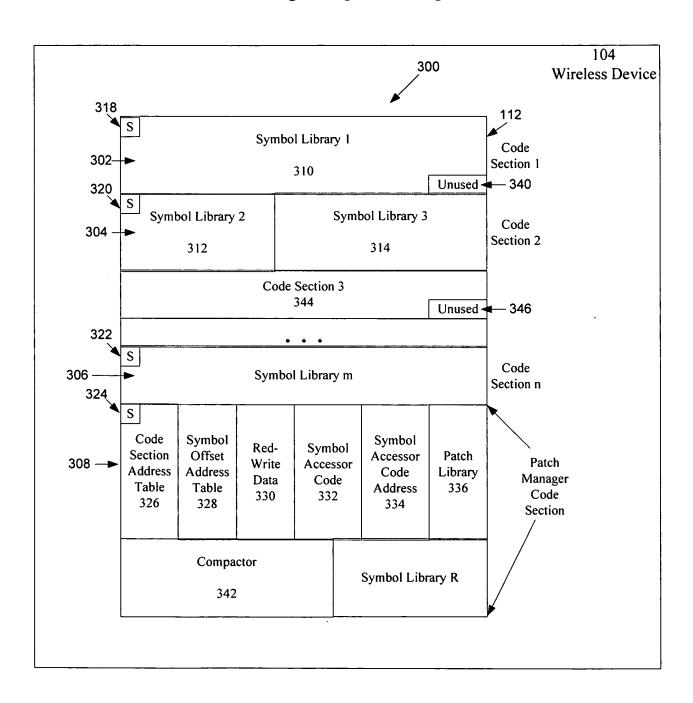
Figure 2
Wireless Device OTA Software
Maintenance System



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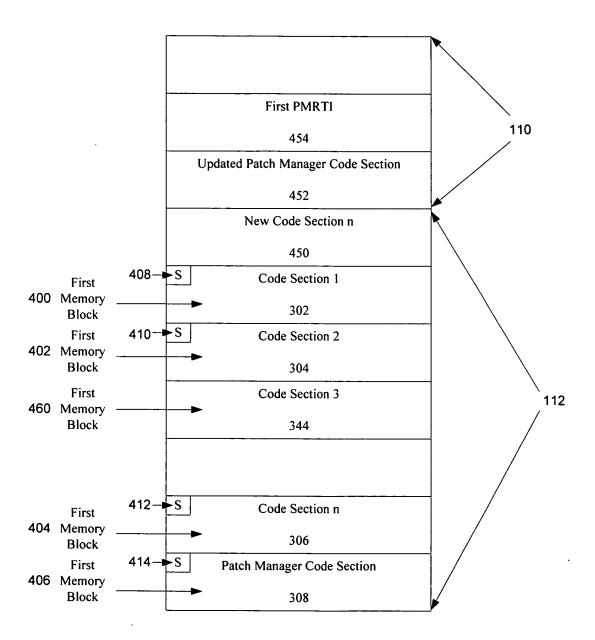
Figure 3
Wireless Device OTA Software
Maintenance/Reorganizing Block Diagram



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Figure 4
Wireless Device Memory Diagram



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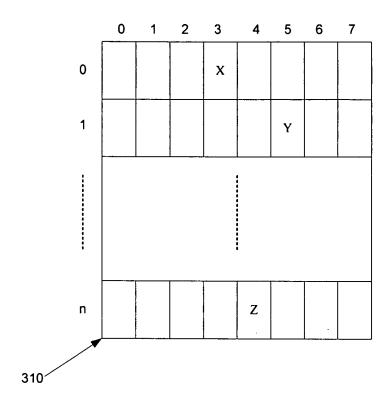
Figure 5
Code Section Address Table

26		
	Code Section Address Table	
	IDENTIFIERS	ADDRESSES
	CS_1	Start Address 1 (00100)
	CS_2	Start Address 2 (00200)
	CS_n	Start Address n (00700)
	PM	Start Address p (01000)

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Figure 6
Symbol Library 1



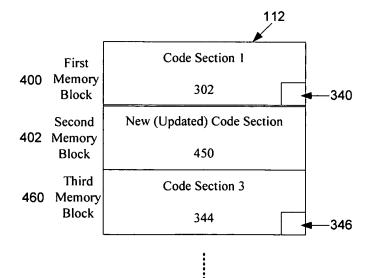
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Inventor(s): RAJARAM, Gowri and KAPLAN, Diego Attorney Docket No.: UTL 00103

Figure 7
Symbol Offset Address
Table

Symbol Offset Address Table			
Symbol ID	Code Section ID	Offset	
X_1	CS_I	O3	
Y_1	CS_1	15	
P_1	CS_2	11	
Q_1	CS_2	33	
AA_3	CS_2	47	

Figure 8
Exemplar
Compacting
Results



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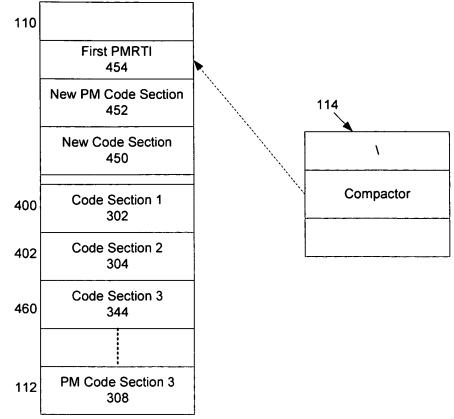
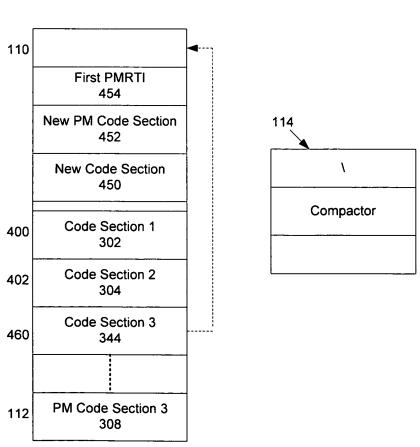
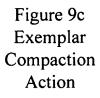


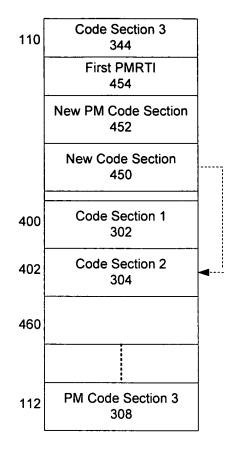
Figure 9b
Exemplar
Compaction
Action



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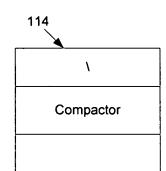
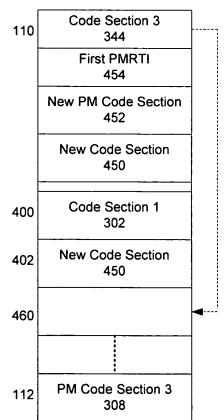
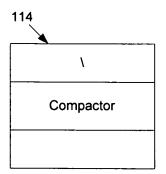


Figure 9d
Exemplar
Compaction
Action

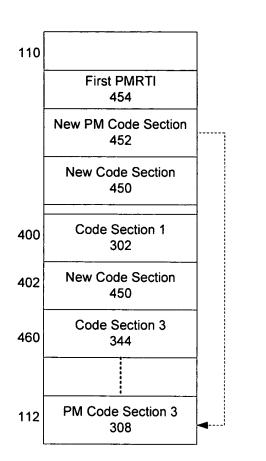


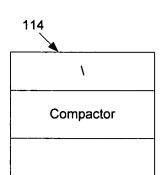


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Figure 9e Exemplar Compaction Action

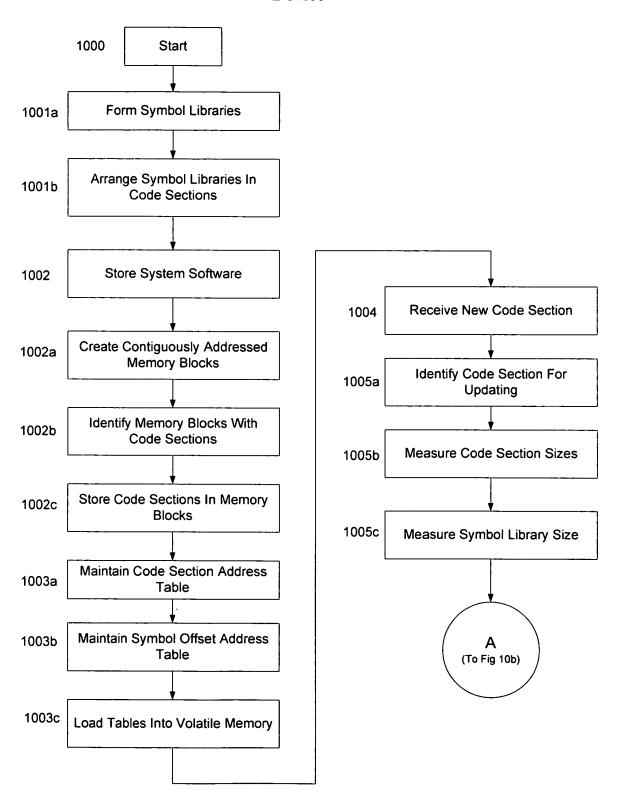




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Figure 10a
Reorganizing Software In A
Wireless Communications
Device



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Figure 10b Reorganizing Software In A Wireless Communications Device В (From Fig 10a) Measure Size Of New Code 1005d Section **Determine If New Code Section** 1005e Can Be Arranged With Current Code Sections 1005f Calculate Code Section Sizes 1009c Reset Wireless Device 1006 Resize Current Code Sections Load Updated Tables Into 1009d Volatile Memory 1007a Generate Compaction Schedule **Execute Updated System** 1010 Software Temporarily Move Code Sections 1007b To FSS Arrange New Code Sections With 1008 **Current Code Sections** Change Code Section Start 1009a Addresses Generate Updated Code Section 1009b Address Table

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